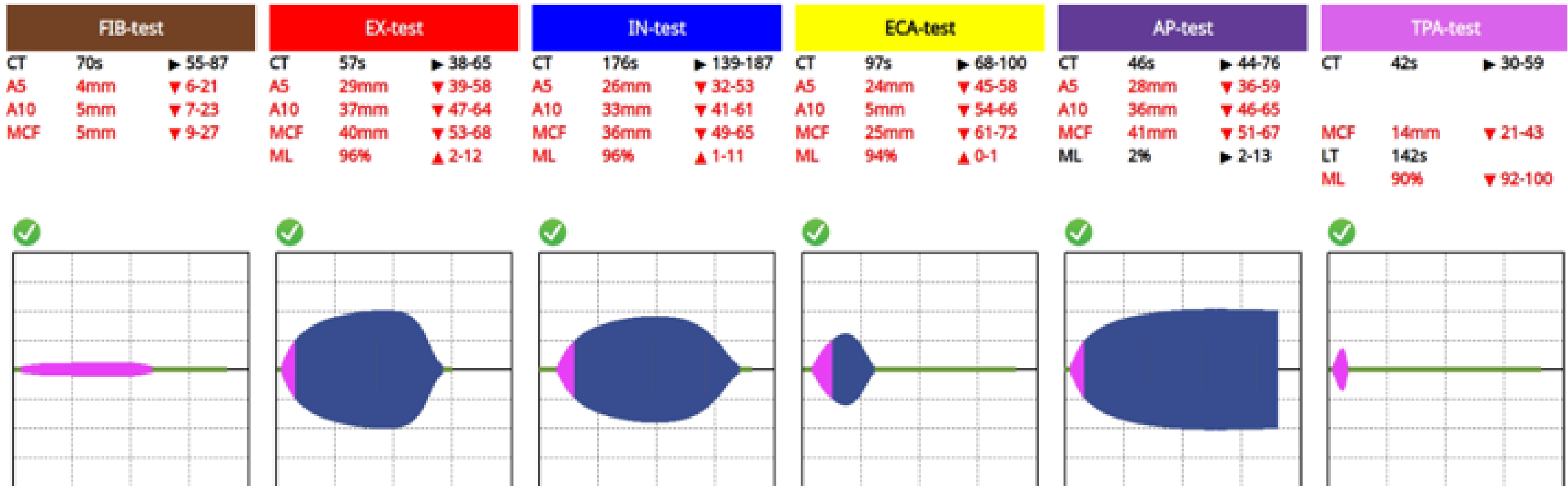


# Clotpro case 3

- 23 year old female is taken under lights and sirens by ambulance immediately after a home birth with severe uterine haemorrhage.

Clotpro Results on arrival figure A.

Interpret these results – what would you give?



# Interpretation

## Results on arrival

Step 1: FIB-test A5 is 4mm , a critically low fibrinogen. This patient will need a very large dose of fibrinogen to correct the FIB-test A5 to  $> 12$ mm. Consider what you would order in your institution. If your hospital uses "Adult Dose of cryoprecipitate" you would order at least 2 adult doses. In Australia this is usually 2 x10 WB cryo 2 x 5 apheresis cryo. Alternatively 6-8g fibrinogen concentrate would also be reasonable.

Step 2: Thrombin generation, the EX-test results are normal ( CT 57 sec) therefore no apparent deficiency of coagulation factors . These values should be reassessed after further fibrinogen and fluid resuscitation.

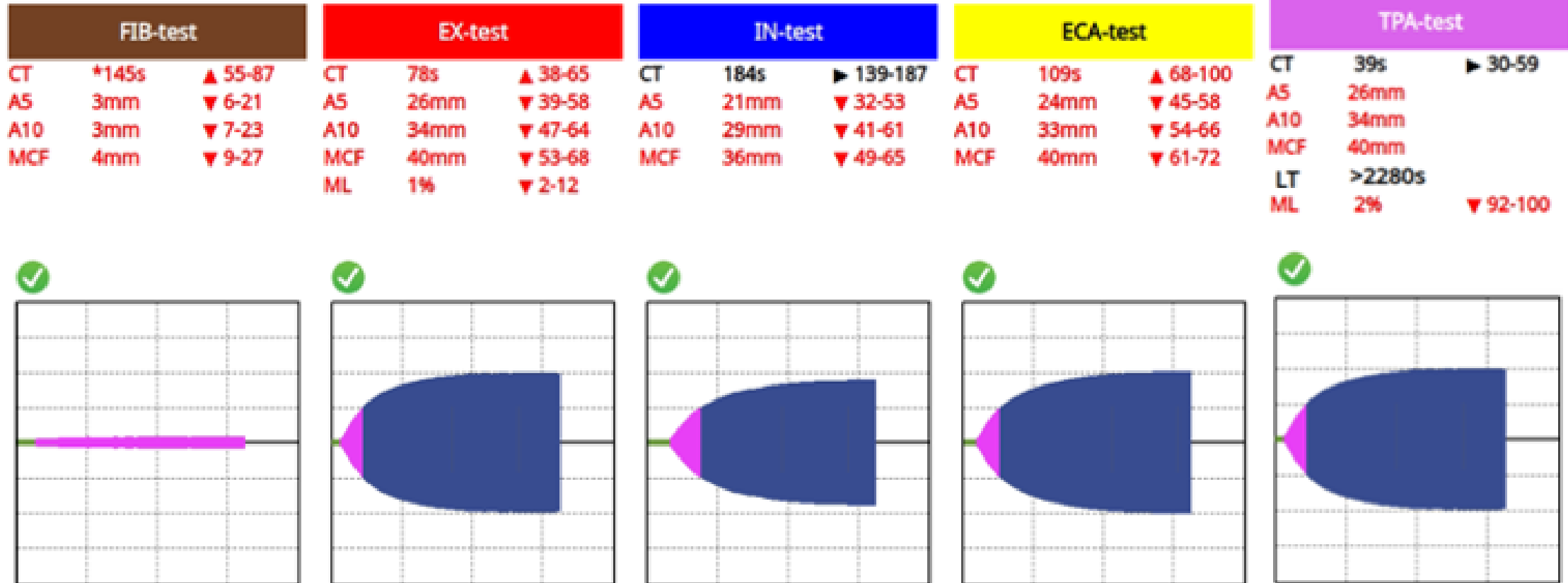
Step 3: Platelets, the EX-test A5 (28mm) is less than 35mm but the FIB-test is  $< 10$ mm . Given the patients critical bleeding a unit of platelets would be appropriate.

Step 4: Clot Stability, severe hyperfibrinolysis is shown in the in EX, FIB, TPA, IN and especially early in the ECA (11 min). The reason the ECA-test is so sensitive to fibrinolysis is due to a weak clot ( no calcium in ECA reagent therefore reduced activation of FXIII and TAFI).

AP- test contains aprotinin (inhibits plasmin), which confirms hyperfibrinolysis

# Clotpro case 3

- Initial resuscitation is with red cells, fibrinogen and TXA followed by a large volume transfusion
- Blood samples drawn for coagulation panel testing by Clotpro again 45min later



# Interpretation

## **Results after 45 minutes**

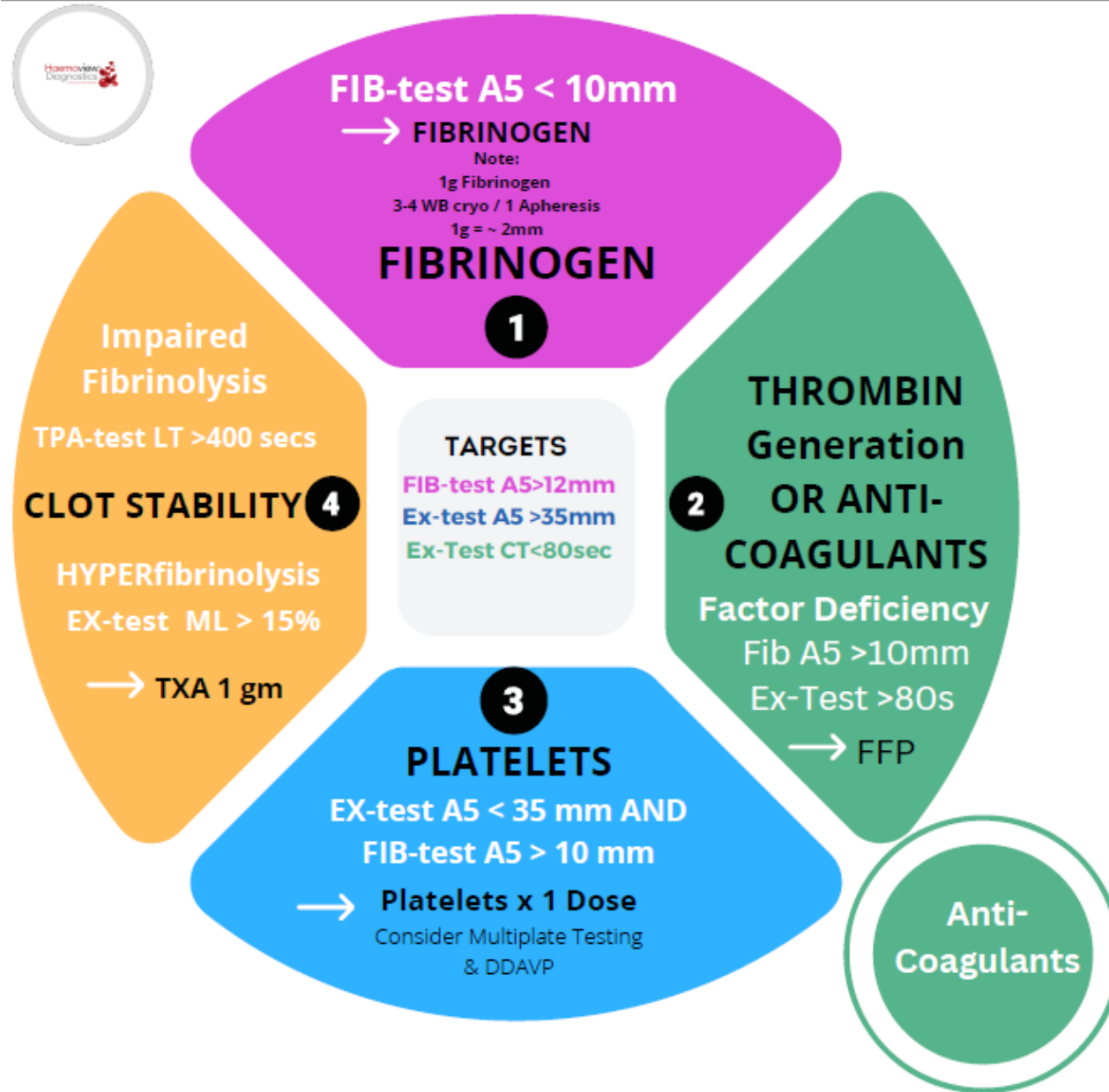
Step 1: FIB-test A5 is 3mm, still a critically low fibrinogen result. Until surgical haemostasis is achieved significant fibrinogen replacement is still required, dosing as per initial treatment is needed with repeat testing 10 minutes after each dose of fibrinogen.

Step 2/3 : Thrombin generation and platelets as determined by the EX-test ( CT 78 sec A5 26 mm) have now deteriorated but given the low fibrinogen these parameters should be reviewed after fibrinogen has been corrected. Following surgical haemostasis and fibrinogen replacement , results should return to normal

Step 4: The hyperfibrinolysis is no longer present due to an adequate dose of TXA. Blocked lysis in the TPA-test, lysis time (LT) > 2280s .



Only treat abnormal value if **SIGNIFICANT BLEEDING** is present.



**RVV Test**  
 Fxa Inhibitors/ LMWH  
 CT >100s ~50ng/ml  
 CT 100-150s- DOAC EFFECT  
 CT >150s RELEVANT effect- reversal indicated

**ECA Test**  
 Direct Thrombin Inhibitors  
 CT >180s  
 Dabigatan > 50ng/ml

**IN-Test**  
 Heparin Effect  
 IN-test CT > 190s and  
 $\frac{IN-test\ CT}{HI-test\ CT}$  ratio  $\geq 1.25$

**Hi-Test**  
 Protamine  
 IN-test AND HI-test  
 CT > 240 s

Physiological Targets

- T° > 36
- pH > 7.2
- iCa > 1mmol/L